

FIG. 1

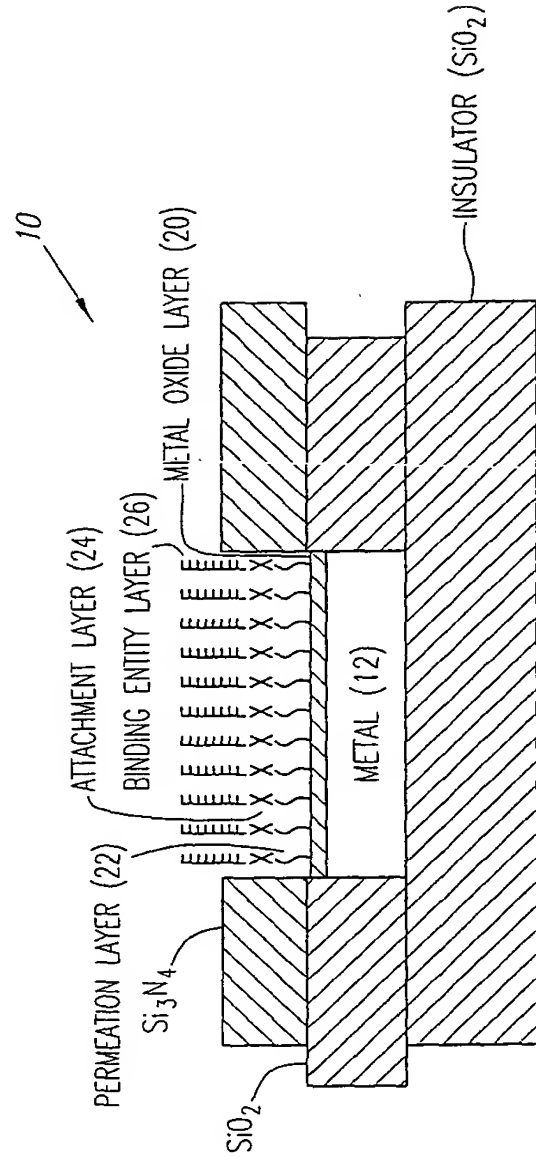


FIG. 2

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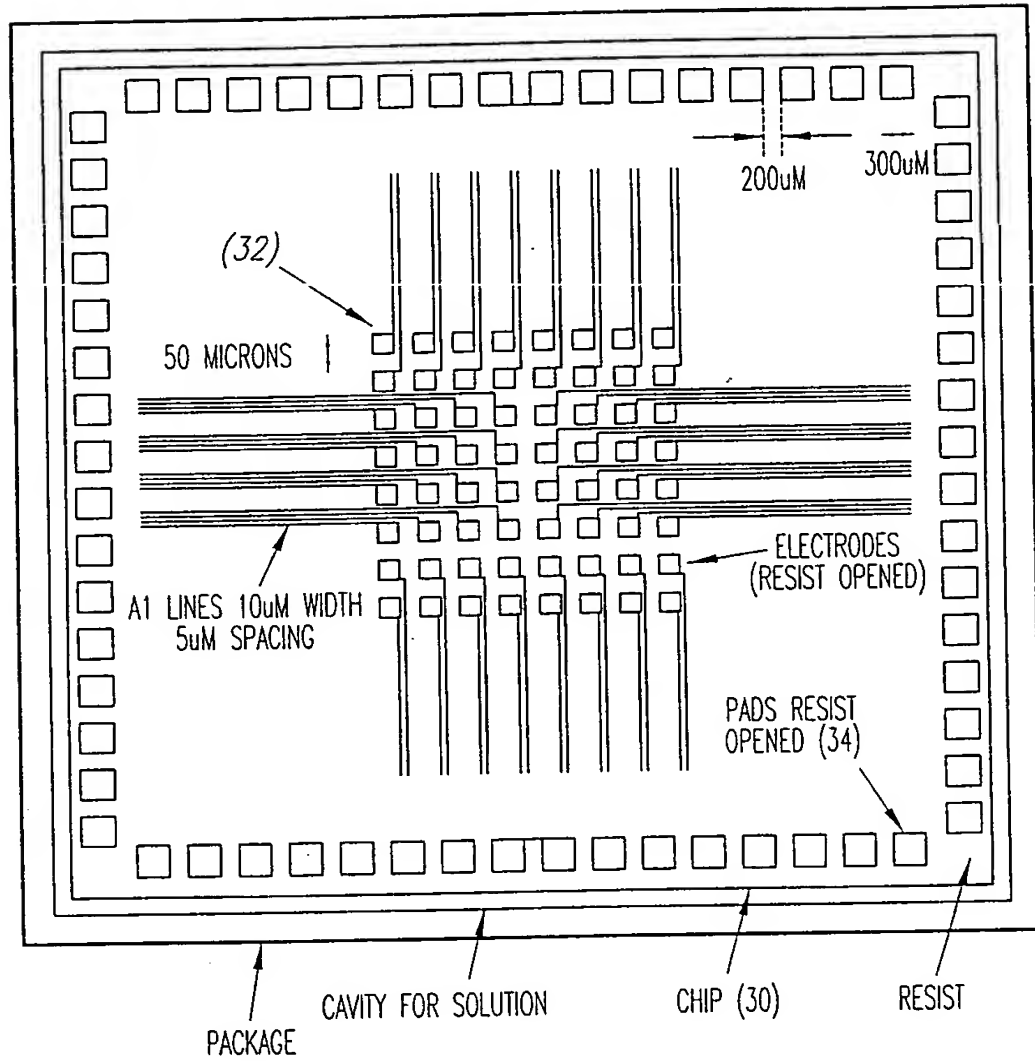


FIG. 3

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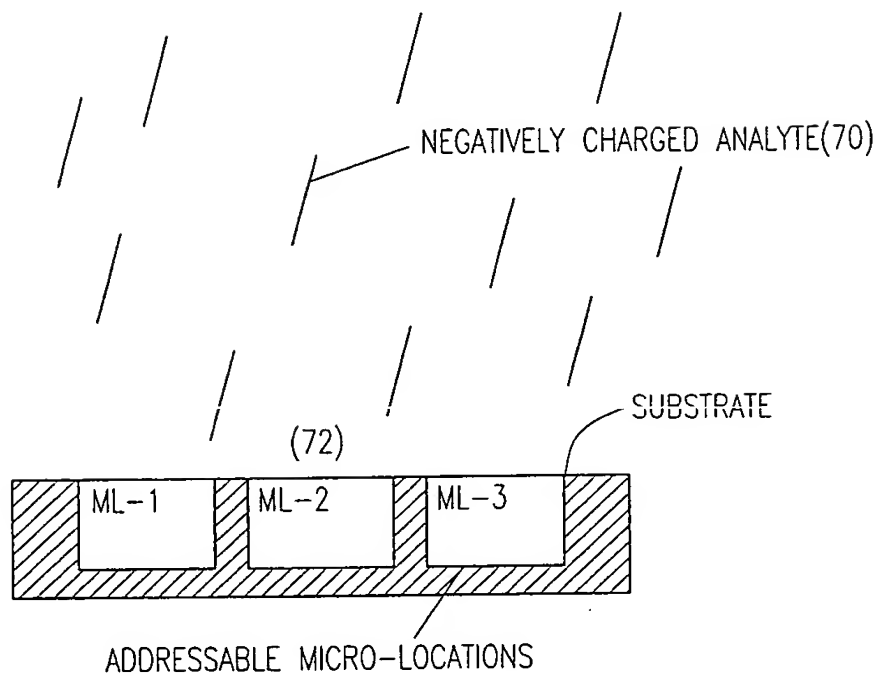


FIG. 4A

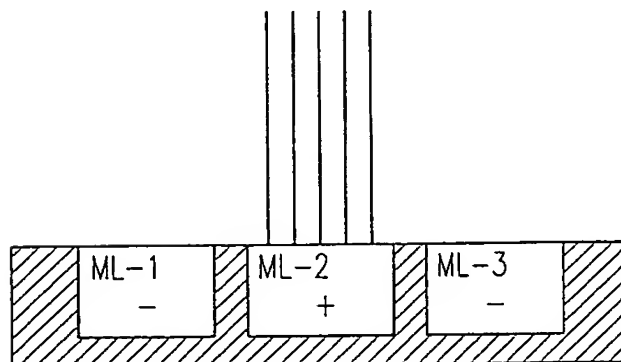


FIG. 4B

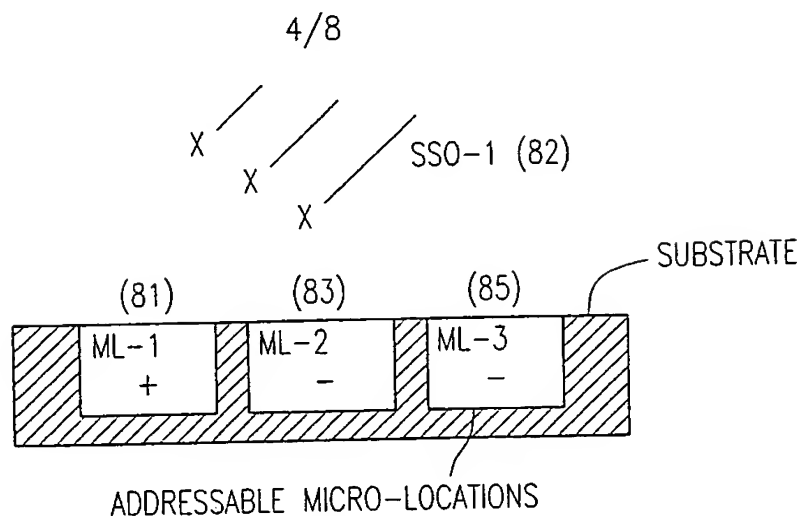


FIG. 5A

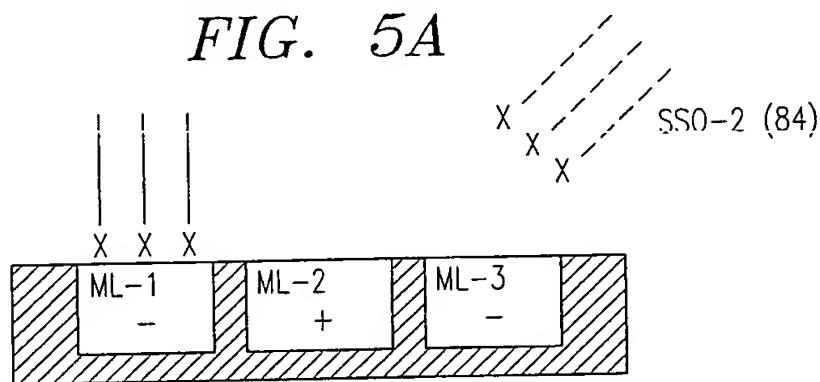


FIG. 5B

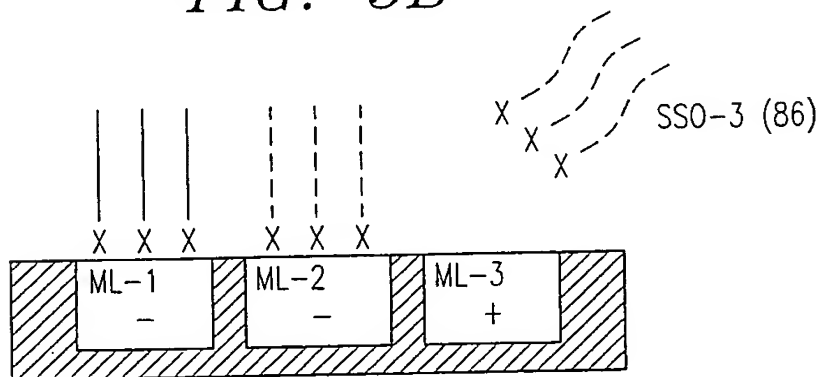


FIG. 5C

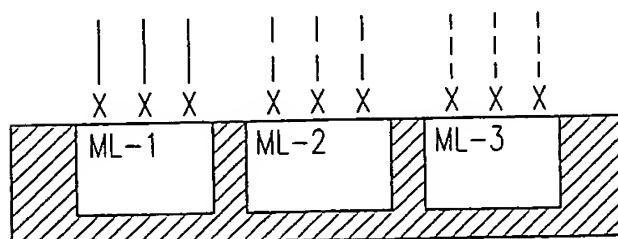


FIG. 5D

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SOL-GEL PERMEATION LAYER WITH AGAROSE

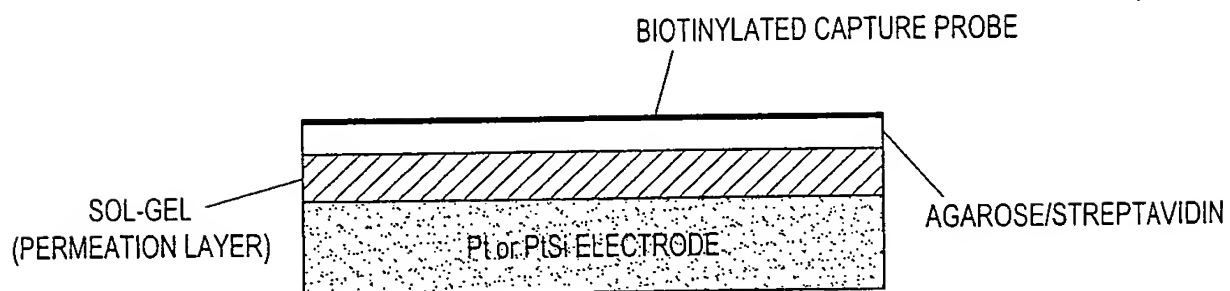


FIG. 6

SOL-GEL PERMEATION LAYER WITH COVALENT ATTACHMENT OF CAPTURE PROBE

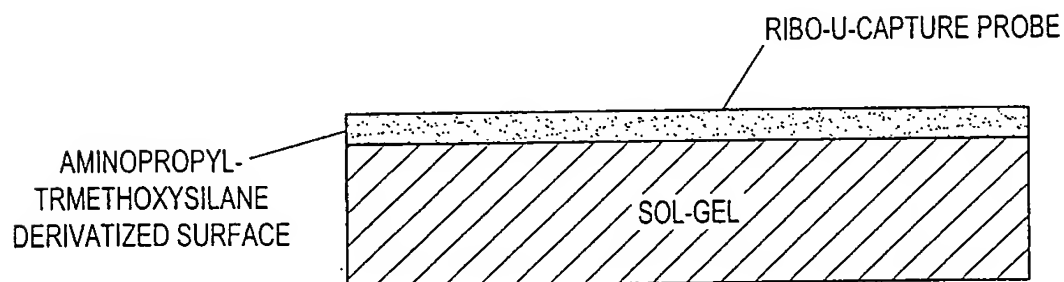
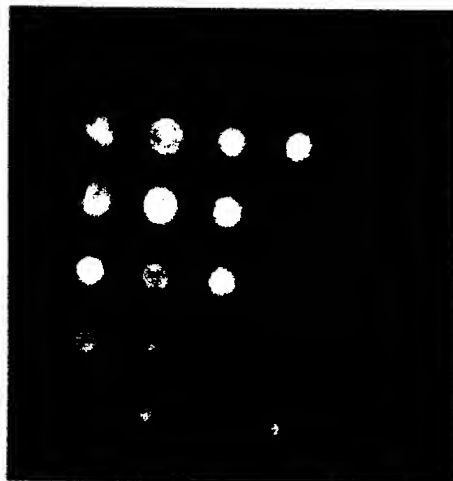


FIG. 9

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Thin agarose/streptavidin on thick sol-gel
Capture Load with 20 nM biotin-T12-BTR
Sol-Gel sample a242e 02_04



Reverse Dot Hybridization - ATA.6/RCA.6

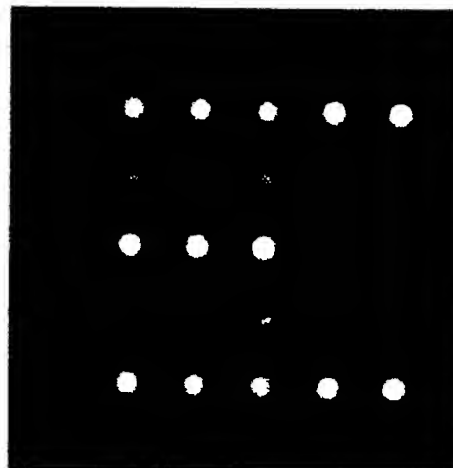


FIG. 8

FIG. 7

Conditions		200 nA, 2min		400 nA, pulse		200 nA, 4 min		200 nA, 4 min	
		200 nA, pulse		400 nA, pulse		400 nA, 2 min		400 nA, 2 min	
		200 nA, pulse		400 nA, pulse		400 nA, pulse		400 nA, pulse	
		none		none		none		none	
		none		none		none		none	
Results (MFI/sec)		2739.7	3223.46	7303.89	4833.02	4507.12			
		2736.55	2432.76	3869.88	4910.55	4361.04			
		2410.51	1812.5	6061.99	7301.65	5521.98			
		2360.5	500.14	536.48	566.61	6097.33			
		2191.22	466.62	502.07	517.45	512.36			
Capture Load - Columns 1, 3, 5 w/500 nM ATA-II, Columns 2,4 w/500 nM ATA.4									
Loading at a pulsed 400 nA per pad program; # of points listed below									
		1800	900	900	900	900			900
		1800	900	900	900	900			900
		1800	900	900	900	900			900
		1800	N/A	N/A	N/A	900			900
		1800	N/A	N/A	N/A	N/A			900
Target address - 400 nA pulse per pad, 0.1 sec ON, 0.2 sec OFF, 1000pts.									
20nM RCA.6-BTR									
Results:		223.23	152.75	259.58	165.04	207.27			
		201.95	155.39	261.19	163.37	210.47			
		199.1	165.99	315.9	168.12	193.91			
		226.18	138.23	138.11	147.53	254.02			
		261.76	137.52	137.38	137.46	254.67			
Column 1 vs. Column 2				Column 3.5 vs. Column 4					
Sp/NSp =		1.41		Sp/NSp =		1.48			

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Passive hybridization, 2% CTAB

- APS treated sol-gel
- ACA5-ribo-U (1.71 μ M)

PH 7.4

Attachment time: 24 hrs.

- RCA5-BTR (10 μ M)

Incubation time: 15 min.

10 secretory integration (C3):

On pads: Average. MFI = 6760

Off pads: Average. MFI = 3750

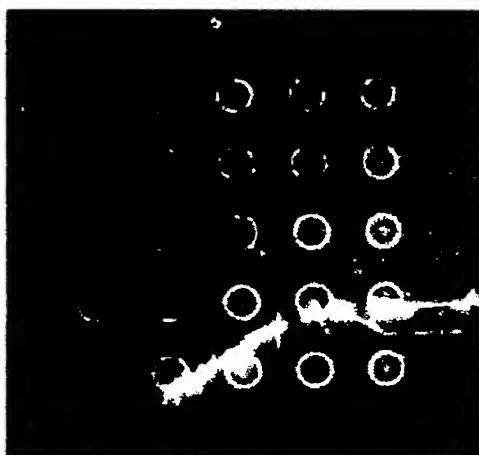


FIG. 10

FIG. 10

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Experimental Method

Passive hybridization on APS-modified sol-gel surfaces (ATA5-RCA5 duplex)

Sol-Gel coatings are derived from 2% CTAB and are approximately 250 nm thick, except for the right most chip which was over 500 nm thick and synthesized from 3% CTAB.

All values reported are for fluorescence averaged over the 25 pads

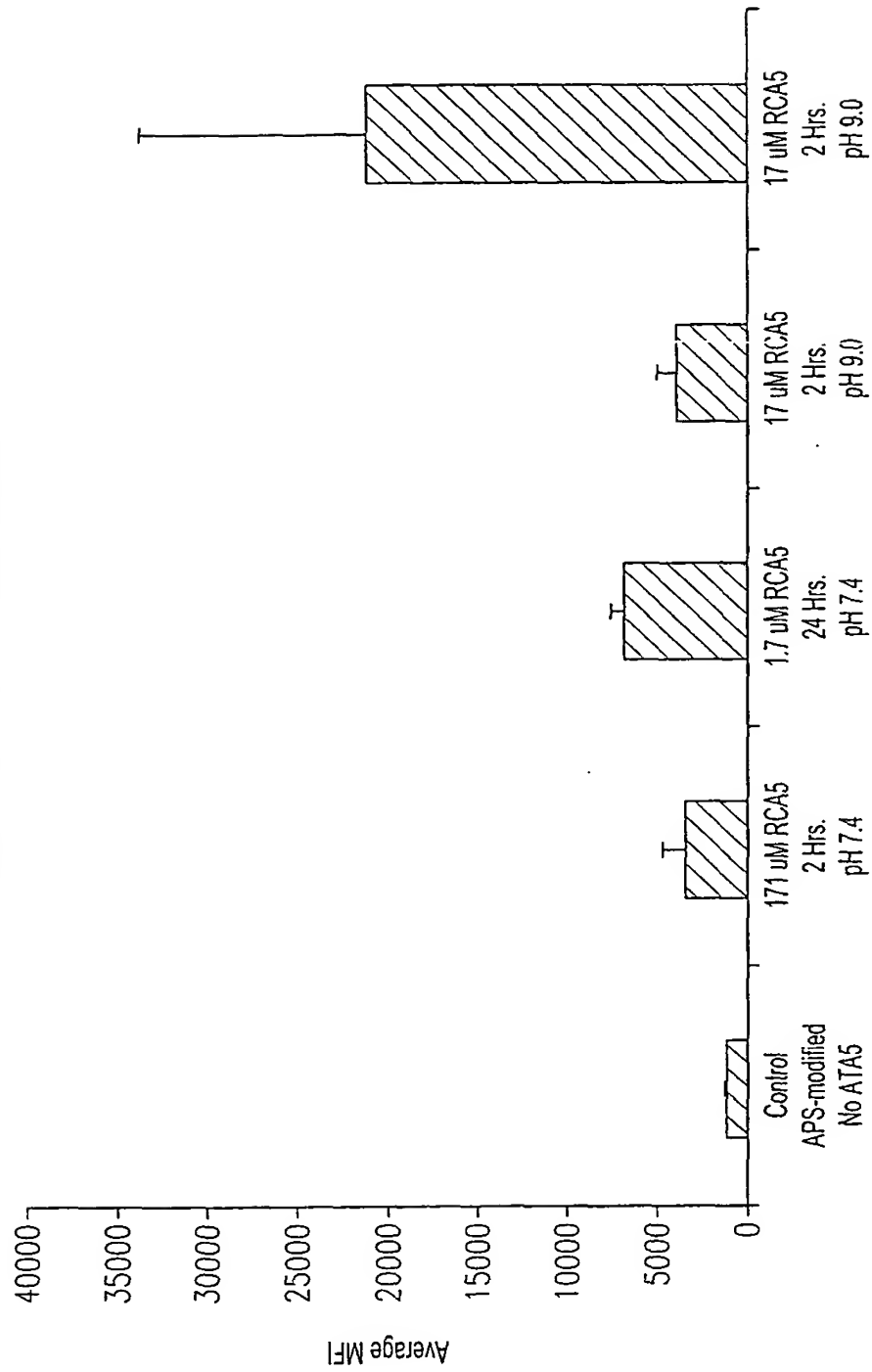


FIG. 11